

D 1
2. (Twice Amended) A semiconductor device comprising an insulating interlayer formed on a conductive film and including a first insulating layer of a composition containing SiH, and a second insulating layer formed on said first insulating layer,

C 1
wherein a threshold at which a degassing amount from said first insulating layer abruptly decreases upon a slight increase in the SiH content exists in the relation between said SiH content of said first insulating layer and said degassing amount from said first insulating layer,

said first insulating layer has a SiH content not less than said threshold, and

said second insulating layer has a multilayer structure made up from layers of the same material.

7. (Twice Amended) A semiconductor device comprising a semiconductor element formed on a semiconductor substrate, and a multilayered interconnection structure formed over said semiconductor element and electrically connected to said semiconductor element,

C 2
wherein said multilayered interconnection structure is an interconnection structure of at least two layers in which a conductive film or a lower interconnection layer and an upper interconnection layer formed on an insulating interlayer are electrically connected through a contact hole formed in said insulating interlayer,

said insulating interlayer includes a first insulating layer of a composition containing SiH, and a second insulating layer formed on said first insulating layer, a threshold at which a degassing amount from said first insulating layer abruptly decreases upon a slight increase in the SiH content exists in the relation between said SiH content of said first insulating layer and said degassing

amount from said first insulating layer,

D₂ said first insulating layer has a SiH content not less than said threshold, and

said second insulating layer has a multilayer structure made up from layers of the same material.

C₂ 8. (Three Times Amended) A semiconductor device comprising a semiconductor element formed on a semiconductor substrate, and a multilayer interconnection structure formed over said semiconductor element and electrically connected to said semiconductor element,

wherein said multilayered interconnection structure is an interconnection structure of at least two layers in which a conductive film or a lower interconnection layer and an upper interconnection layer formed on an insulating interlayer are electrically connected through a contact hole formed in said insulating interlayer,

said insulating interlayer includes a first insulating layer of a composition containing SiH₄, and a second insulating layer formed on said first insulating layer,

said first insulating layer has an H content of not less than 15.4 atom% in the composition, and has been formed to cover said conductive film or the lower interconnection layer with a third insulating layer being interposed therebetween, and

said second insulating layer has a multilayer structure made up from layers of the same material.

D2
9. (Twice Amended) A insulating interlayer formed on a conductive film and including a first insulating layer of a composition containing SiH, and a second insulating layer formed on said first insulating layer,

C2
wherein a threshold at which a degassing amount from said first insulating layer abruptly decreases upon a slight increase in the SiH content exists in the relation between said SiH content of said first insulating layer and said degassing amount from said first insulating layer,

said first insulating layer has a SiH content not less than said threshold, and

said second insulating layer has a multilayer structure made up from layers of the same material.